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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/522,744

08/17/2005

Yoshio Akiyama

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OLIFF & BERRIDGE, PLC

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EXAMINER

WOOD, ELLEN S

ART UNIT

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1794

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/522,744	<b>Applicant(s)</b> AKIYAMA ET AL.	
	<b>Examiner</b> ELLEN S. WOOD	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7-11 and 13-16 is/are pending in the application.
- 4a) Of the above claim(s) 8-11, 13 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 15 and 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/19/2008</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The applicant amended the claim to include ***“the colored layer has a thickness varied within a range of 50% of the full thickness of the laminated and molded body”***. Does this limitation mean that the colored layer has one thickness that is within a range of 50% of the full thickness of the laminated and molded body? Does this limitation mean that the colored layer could have multiple thicknesses while being co-extruded as long as the thicknesses are within a range of 50% of the full thickness of the laminated and molded body? This is a subjective limitation.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 7, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris (US 5,725,814).

In regards to claim 1, Harris discloses a coextrusion system that employs two or more extruders, each with a gear pump at its output connected to a coextrusion die (abstract). Different materials are extruded by each extruder (abstract). Varying the speed of one or both gear pumps, varies the content of the extrudate (abstract). The coextrusion changes from one material to another gradually or varies along its length in the relative content of the two or more constituent materials (col. 1 lines 23-34). An application is the extrusion of a product that gradually changes from one color to another along a predetermined path, thus forming a gradient of color (col. 3 lines 63-63). A layer of one material is extruded have a thickness continuously varied in a predetermined direction while the full thickness is substantially constant along the predetermined direction (fig. 2 and col. 7 lines 19-20).

In regards to claim 2, Harris discloses the predetermined direction is a direction parallel to the extruding direction of at least one layer of the product (fig. 2).

In regards to claim 7, Harris discloses that the coextrusion systems forms profiles, sheets, blown films, tubes, pipes, etc. (col. 4 lines 62-63).

In regards to claim 15, Harris discloses that extrudates of one, two or materials can be extruded (col. 11 lines 5-7). It is inherent that a frosting layer is a colored layer. Thus, depending on the desired properties of the article formed, a frosting layer could be another extrudate that can be extruded with the various other layers.

Harris is silent with regards to the colored layer having a thickness varied within a range of 50% of the full thickness of the laminated and molded body and the barrier layer.

Harris discloses a coextrusion process in which two or more extruders are employed in combination with a coextrusion die and a gear pump is interposed between each extruder and die. The amount of each material being delivered to the die is varied by controlling the speed of each gear pump (col. 2 lines 36-43). Harris discloses that although specific embodiment varied from 100% of one polymer from one of the gear pumps to 100% of the other polymer from the other of the gear pumps, the technique is not limited to that configuration (col. 4 lines 62-67). Other ratios and schedules of variations are apparent and it is not necessary that the extrudate be maintained constant in cross sectional dimension if variation in that dimension is desired (col. 5 lines 1-6). Thus, it can be seen that it would be obvious to one of ordinary skill in the art to use the coextrusion process of Harris to produce a colored layer that has a thickness varied with a range of 50% of the full thickness of the laminated and molded body, because this process would reduce on waste produced by having more than one extrudate material (col. 2 lines 14-19). Also, the article would have accurate dimensions and material content (col. 2 lines 28-32).

Harris discloses that extrudates of one, two or materials can be extruded (col. 11 lines 5-7). It is known to one of ordinary skill in the art that barrier layers are used in the production of containers to pro-long shelf life of the containers contents. Thus, it would be obvious to one of ordinary skill in the art to use a barrier layer as one of the materials that is being extruded, because the container formed would have the desired protective properties while maintaining the design aspect of the container.

5. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris (US 5,725,814) in view of Ono et al. (JP 05-220739).

Harris discloses a co-extrusion system that employs two or more extruders, each with a gear pump at its output connected to a co-extrusion die (abstract). Different materials are extruded by each extruder (abstract). Varying the speed of one or both gear pumps, varies the content of the extrudate (abstract). An application is the extrusion of a product that gradually changes from one color to another along a predetermined path, thus forming a gradient of color (col. 3 lines 63-63). A layer of one material is extruded have a thickness continuously varied in a predetermined direction while the full thickness is substantially constant along the predetermined direction (fig. 2 and col. 7 lines 19-20).

Harris is silent with regards to the intersection of the predetermined direction.

Ono discloses that a conventional equipment to form a multilayer parison with a primary and secondary resins that flow down two separate paths [0002]. The amount thickness of the layers is controlled by the flow of the resin through the co-extrusion machine [0002]. This type of equipment produces a parison that joins the principal member resin and secondary-member resin to form a shape of a straight line parallel to a parison axial center [0003]. Ono discloses that a parison can be made where if one wanted to make a predetermined configuration, i.e. a snake like column, then this would be possible using a rotatable path for the secondary-member [0004]. The path rotates on a predetermined period, thus providing a constant thickness [0005].

Harris and Ono use a similar co-extrusion system that uses two or more extruders and the thickness of the layers is controlled by the speed of the flow of the extrudate through the co-extrusion machine. Thus, it would be obvious to one of ordinary skill in the art to combine the gradient affect with colors shown by Harris with the intersecting extruding direction of Ono to form a product that can have various designs, colors, and mask the yellowness that is formed from the co-extrusion process.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-4, 7 and 15-16 have been considered but are moot in view of the new ground(s) of rejection.

The applicant amended claim one to include the limitation ***“the colored layer has a thickness varied within a range of 50% of the full thickness of the laminated and molded body”***. This limitation has been discussed the previous sections with regards to Harris.

The applicant argues that Ono does not teach maintaining the color layer to no more than 50% of the total thickness of the laminated and molded body. In response to Applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The Ono reference uses a method to form the intersection patterns as though claimed by applicant. These patterns could be used in the coextrusion process seen in Harris,

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because they both use a similar technique of coextrusion with the use of gear pumps to maintain the flow of the extrudate. Thus, it can be seen that the patterns of Ono could be formed using the gradient that is disclosed by Harris.

7. Claim 6 has been cancelled.
8. The Yoshioka reference has been cited on the PTO-892.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLEN S. WOOD whose telephone number is (571)270-3450. The examiner can normally be reached on M-F 730-5 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Sample can be reached on (571)272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/  
Supervisory Patent Examiner, Art Unit 1794